Sonel®

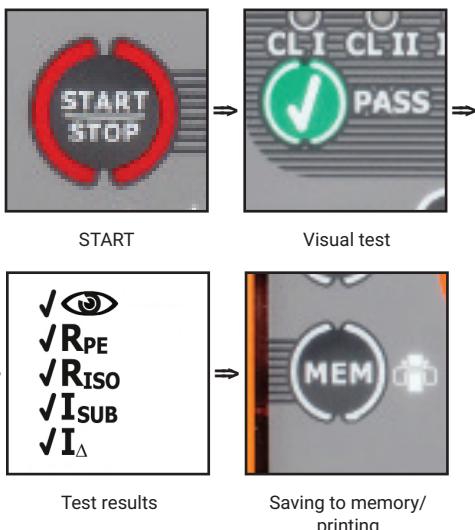# PAT-1/2/2E/10
Portable appliance tester
index: WMGBPAT1 / WMGBPAT2 / WMGBPAT2E / WMGBPAT10

Full autotest procedure after one START:

START

Visual test

√ 👁
√R_{PE}
√R_{ISO}
√I_{SUB}
√I_{Δ}

Test results

Saving to memory/ printing

LED test results indication (PASS / FAIL):

Quick access to the measurement procedures - one click:

CAT II 300V	R_{PE} 10A	LED ✓✗	IP 40	WiFi
	PAT-10 only			Not applicable PAT-1

DESCRIPTION

The innovative combination of small dimensions (full portability of the device) with advanced measuring systems allow to carry out fully automated measurements for electrical equipment, IEC cables and extension cords (including those with PRCD). The set of tests is performed with one click of START button. Configuration options of the meter allow you to modify the operation of the device, and thus, tailor it to the needs of the user. In situations, where it is necessary to perform simple and single measurement, without the need to do complex measurement procedure, Pat Sonel allow you to work in a single measurement mode of a given type (ie. Manual). All meters in this series (Pat) also allow you to make basic measurements without external power in emergency situations i.e. in the absence of the power one can easily run a simplified set of test in a battery mode.

Small size, weight, and specially designed carrying case of the meter and accessories provide comfort and high mobility. Wireless communication with a printer enables organization of the working site without the hassle of unnecessary cables. Storage and integration of the results in PC software further extends the functionality of the instrument.

MAIN FUNCTIONS (PAT-10):
* (Not applicable PAT-1)

- » led test results indication
- » quick access to the measurement procedures,
- » measurement of protective conductor resistance with the currents: 200 mA, 10 A ,
- » measurement of insulation resistance,
- » PRCD trip time testing,
- » measurement of equivalent, touch and differential leakage current,
- » IEC lead test,
- » measurement of mains voltage,
- » internal results memory,
- » automatic measurement range selection,
- » compact design, ergonomic soft case,
- » works with the program Sonel Reader and Sonel PAT (option).

SPECIFICATIONS

Model	PAT-1	PAT-2	PAT-2E	PAT-10
Visual inspection	+	+	+	+
Earth bond resistance I = 200mA	+(0.01…19.99 Ω)	+(0.01…19.99 Ω)	+(0.01…19.99 Ω)	+(0.01…19.99 Ω)
Earth bond resistance I = 10A	-	-	-	+(0.001…1.99 Ω)
Insulation resistance 250V	-	-	-	+(0.01…99.9 MΩ)
Insulation resistance 500V	+(0.01…99.9 MΩ)	+(0.01…99.9 MΩ)	+(0.01…99.9 MΩ)	+(0.01…99.9 MΩ)
Alternative leakage current	+(0.01…19.9 mA)	+(0.01…19.9 mA)	+(0.01…19.9 mA)	+(0.01…19.9 mA)
Touch leakage current	-	-	+(0.001…4.999 mA)	+(0.001…4.999 mA)
Differential leakage current	-	-	+(0.10…19.9 mA)	+(0.10…19.9 mA)
IEC cord test (R_{ISO}, R_{PE}, Polarity)	+	+	+	+
PRCD (trip time for $I_{\Delta n}$: x1/ x5; 0° and 180°)	-	-	10 mA, 30 mA	10 mA, 30 mA
Built-in Memory	-	+	+	+
WiFi	-	+	+	+
Cooperation with printer	-	+	+	+
Data transmition to PC	+	+	+	+
Power supply	battery powered (+ can measure in charging mode)	battery powered (+ can measure in charging mode)	50 Hz (or 60Hz) U nominal. 220V.230V.240V / battery powered	50 Hz (or 60Hz) U nominal. 220V.230V.240V / battery powered
Measurement Category CAT II 300V	+	+	+	+
Weight [kg] / size [cm]	ok. 1.40 kg / 200 mm x 180 mm x 77 mm	ok. 1.40 kg / 200 mm x 180 mm x 77 mm	ok. 1,55 kg / 200 mm x 180 mm x 77 mm	ok. 1.55 kg / 200 mm x 180 mm x 77 mm

PAT CAN BE USED TO TEST THE EQUIPMENT PERFORMANCE IN ACCORDANCE WITH STANDARDS:

» PEN 60745-1 Hand-held motor-operated electric tools. Safety. General requirements
» EN 61029 Safety of transportable motor-operated electric tools - General requirements
» EN 60335-1 Household and similar electrical appliances -Safety -Part 1: General requirements
» EN 60950 Safety of information technology equipment (IT Equipment)
» AS/NZS 3760:2010 In-service safety inspection and testing of electrical equipment
» VDE 0404-1 Prüf - und Messeinrichtungen zum Prüfen der elektrischen Sicherheit von elektrischen Geräten. Teil 1: Allgemeine Anforderungen
» VDE 0404-2 Prüf - und Messeinrichtungen zum Prüfen der elektrischen Sicherheit von elektrischen Geräten. Teil 2: Prüfeinrichtungen für Prüfungen nach Instandsetzung, Änderung oder für Wiederholungsprüfungen
» VDE 0701-0702 Prüfung nach Instandsetzung, Änderung elektrischer Geräte. Wiederholungsprüfung elektrischer Geräte. Allgemeine Anforderungen für die elektrische Sicherheit

ACCESSORIES

PAT-1 Standard accessories

Crocodile clip K02; red	WAKRORE20K02
Test lead with banana plug; 1.2 m; red	WAPRZ1X2REBB2X5
Pin probe with banana connector - red	WASONREOGB1
Power cord IEC (red)	WAPRZ1X8REIEC
Sonel Reader software	WAPROREADER
User manual	

PAT-1 Optional accessories

Carrying case M12	WAFUTM12

PAT-2/2E/10 Standard accessories

Crocodile clip K02; red	WAKRORE20K02
Pin probe with banana connector - red	WASONREOGB1
Test lead with banana plug; 1.2 m; red	WAPRZ1X2REBB2X5
Power cord IEC (red)	WAPRZ1X8REIEC
USB transmission cable	WAPRZUSB
Fuse x2 (PAT-2E / PAT-10 only)	WAFUTM12
Carrying case M12	WAPOZB16PAT
Sonel Reader software	WAPROREADER
User manual	

PAT-2/2E/10 Optional accessories

WiFi printer	WAADAD3
Sticker–paper tape for Brother printer	WANAKD3
Battery for Brother printer	WAAKU19

Optionall for all

cable - adapter Shuko / IEC (for testing extensions)	WAADAPATIEC2
three phase socket adapter 16A	WAADAPAT16P
three phase socket adapter 16A, switchable	WAADAPAT16PR
three phase socket adapter 32A	WAADAPAT32P
three phase socket adapter 32A, switchable	WAADAPAT32PR
adapter for industrial sockets 16A	WAADAPAT16F1
adapter for industrial sockets 32A	WAADAPAT32F1
adapter IEC 60320 C6 Plug to IEC 60320 C13 Connector Block	WAADAPATIEC1
Sonel PAT+ software	WAPROSONPAT2
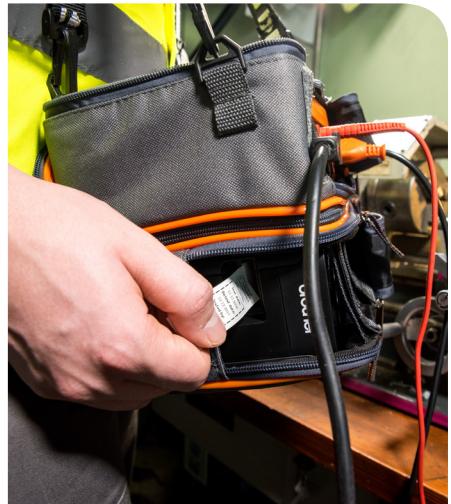
SONEL PAT+

Sonel PAT plus software is designed for companies carrying out testing of portable electrical appliances.

It is ideal solution for big industrial companies, rent and service of electrical appliances etc. Sonel PAT plus communicates with PAT testers. All data saved in tester memory are transferred automatically to proper tables in the software.

Software produces reports according to following standards:
- » VDE 0701:1,
- » VDE 0701:200,
- » VDE 0701:240,
- » VDE 0701:260,
- » DIN VDE 0702,
- » DIN VDE 0751,
- » EN61010,
- » EN 60335,
- » EN 60950,
- » IEC 60601,
- » EN 62353 .

Software collects, analyzes and archives PAT test results and follows tests history. Every appliance is associated with concrete company and department.

Tests can be printed out in 4 versions:
- » Test report – shows on one page all tests and all features of appliance.
- » History of tests – shows in one table all test results.
- » Short history of tests – prints basic information about test of appliance.
- » Summary report - sorted according to the category of measurement.

This option enables to add new print data on existing appliance card. Complete documentation can be also saved to PDF file. All data and test results are administered by Scheduler. For every appliance user set "Test cycle" Thanks to this function software automatically displays appliances with overdue test validity and can send email notification to the customer.